

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

1. (Currently Amended) A method, comprising:
processing a prefetch command indicating at least one conditional statement indicating a condition with respect to content of a received Input/Output request and at least one block to prefetch from storage to cache in response to determining that the conditional statement is satisfied.

2. (Currently Amended) The method of claim 1, wherein the ~~conditional statement~~ condition with respect to the content of the I/O request indicates a block that when accessed causes the prefetching of the at least one block to prefetch indicated in the conditional statement, wherein processing the prefetch command comprises:

generating the prefetch command using predictive analysis techniques to determine blocks anticipated to be accessed if a specified block is accessed, wherein the conditional statements specifies to prefetch the at least one block anticipated to be accessed if the specified block is accessed.

3. (Currently Amended) The method of claim 1, wherein one conditional ~~statement~~ statement is satisfied if an Input/Output request is directed to a specified block in the conditional statement.

4. (Original) The method of claim 3, wherein processing the prefetch command comprises generating the prefetch command, further comprising:
transmitting the generated prefetch command to a storage controller; and
transmitting Input/Output (I/O) requests to the storage controller after transmitting the generated prefetch command, wherein the storage controller prefetches the at least one block to prefetch indicated in one prefetch command in response to determining that the I/O request is directed to the specified block in the conditional statement of one prefetch command.

5. (Original) The method of claim 3, wherein processing the prefetch command further comprises:

including a duration parameter in the prefetch command indicating a duration of the prefetch command.

6. (Original) The method of claim 1, wherein processing the prefetch command comprises receiving the prefetch command, further comprising:

receiving an Input/Output request directed to a target block;

determining whether the target block satisfies the conditional statement of one prefetch command; and

prefetching the at least one block to prefetch indicated in the conditional statement of one prefetch command into the cache in response to determining that the target block satisfies the conditional statement of one prefetch command.

7. (Original) The method of claim 6, wherein determining whether the target block satisfies the conditional statement of one prefetch command comprises determining whether the target block satisfies the conditional statement of one unexpired prefetch command.

8. (Original) The method of claim 1, wherein one conditional statement includes a plurality of branch conditions, wherein each branch condition indicates one block and is associated with at least one block to prefetch, further comprising:

prefetching all blocks to prefetch associated with the branch conditions in the conditional statement; and

removing blocks to prefetch from cache associated with branch conditions that are not satisfied in response to determining that the block indicated in one branch condition is accessed.

9. (Currently Amended) A system, comprising:

a cache;

storage; and

circuitry capable of performing operations, the operations comprising processing a prefetch command indicating at least one conditional statement indicating a condition with

respect to content of a received Input/Output request and at least one block to prefetch from the storage to the cache in response to determining that the conditional statement is satisfied.

10. (Original) The system of claim 9, wherein the conditional statement indicates a block that when accessed causes the prefetching of the at least one block to prefetch indicated in the conditional statement, wherein processing the prefetch command comprises:

generating the prefetch command using predictive analysis techniques to determine blocks anticipated to be accessed if a specified block is accessed, wherein the conditional statements specifies to prefetch the at least one block anticipated to be accessed if the specified block is accessed.

11. (Currently Amended) The system of claim 9, wherein one conditional statement is satisfied if an Input/Output request is directed to a specified block in the conditional statement.

12. (Original) The system of claim 11, wherein processing the prefetch command comprises generating the prefetch command, wherein the operations further comprise:

transmitting the generated prefetch command to a storage controller; and
transmitting Input/Output (I/O) requests to the storage controller after transmitting the generated prefetch command, wherein the storage controller prefetches the at least one block to prefetch indicated in one prefetch command in response to determining that the I/O request is directed to the specified block in the conditional statement of one prefetch command.

13. (Original) The system of claim 11, wherein processing the prefetch command further comprises:

including a duration parameter in the prefetch command indicating a duration of the prefetch command.

14. (Original) The system of claim 9, wherein processing the prefetch command comprises receiving the prefetch command, wherein the operations further comprise:

receiving an Input/Output request directed to a target block;

determining whether the target block satisfies the conditional statement of one prefetch command; and

prefetching the at least one block to prefetch indicated in the conditional statement of one prefetch command into the cache in response to determining that the target block satisfies the conditional statement of one prefetch command.

15. (Original) The system of claim 14, wherein determining whether the target block satisfies the conditional statement of one prefetch command comprises determining whether the target block satisfies the conditional statement of one unexpired prefetch command.

16. (Original) The system of claim 9, wherein one conditional statement includes a plurality of branch conditions, wherein each branch condition indicates one block and is associated with at least one block to prefetch, wherein the operations further comprise:

prefetching all blocks to prefetch associated with the branch conditions in the conditional statement; and

removing blocks to prefetch from cache associated with branch conditions that are not satisfied in response to determining that the block indicated in one branch condition is accessed.

17. (Currently Amended) An article of manufacture ~~capable of causing~~ comprising a device implementing code enabled to cause operations to be performed, the operations comprising:

processing a prefetch command indicating at least one conditional statement indicating a condition with respect to content of a received Input/Output request and at least one block to prefetch from storage to cache in response to determining that the conditional statement is satisfied.

18. (Original) The article of manufacture of claim 17, wherein the conditional statement indicates a block that when accessed causes the prefetching of the at least one block to prefetch indicated in the conditional statement, wherein processing the prefetch command comprises:

generating the prefetch command using predictive analysis techniques to determine blocks anticipated to be accessed if a specified block is accessed, wherein the conditional statements specifies to prefetch the at least one block anticipated to be accessed if the specified block is accessed.

19. (Currently Amended) The article of manufacture of claim 17, wherein one conditional [[statements]] statement is satisfied if an Input/Output request is directed to a specified block in the conditional statement.

20. (Original) The article of manufacture of claim 19, wherein processing the prefetch command comprises generating the prefetch command, wherein the operations further comprise:
transmitting the generated prefetch command to a storage controller; and
transmitting Input/Output (I/O) requests to the storage controller after transmitting the generated prefetch command, wherein the storage controller prefetches the at least one block to prefetch indicated in one prefetch command in response to determining that the I/O request is directed to the specified block in the conditional statement of one prefetch command.

21. (Original) The article of manufacture of claim 19, wherein processing the prefetch command further comprises:
including a duration parameter in the prefetch command indicating a duration of the prefetch command.

22. (Original) The article of manufacture of claim 17, wherein processing the prefetch command comprises receiving the prefetch command, and wherein the operations further comprise:
receiving an Input/Output request directed to a target block;
determining whether the target block satisfies the conditional statement of one prefetch command; and
prefetching the at least one block to prefetch indicated in the conditional statement of one prefetch command into the cache in response to determining that the target block satisfies the conditional statement of one prefetch command.

23. (Original) The article of manufacture of claim 22, wherein determining whether the target block satisfies the conditional statement of one prefetch command comprises determining whether the target block satisfies the conditional statement of one unexpired prefetch command.

24. (Original) The article of manufacture of claim 17, wherein one conditional statement includes a plurality of branch conditions, wherein each branch condition indicates one block and is associated with at least one block to prefetch, wherein the operations further comprise:

prefetching all blocks to prefetch associated with the branch conditions in the conditional statement; and

removing blocks to prefetch from cache associated with branch conditions that are not satisfied in response to determining that the block indicated in one branch condition is accessed.

25. (New) The article of manufacture of claim 17, wherein the device comprises at least one of a computer readable medium including the code, wherein a processor executes the code in the computer readable medium to cause the operations to be performed, and a hardware device implementing the code as hardware logic that when executed causes the operations to be performed.